Supporting Information

Cooperation of endogenous and exogenous reactive oxygen species induced by zinc peroxide nanoparticles to enhance oxidative stress-based cancer therapy

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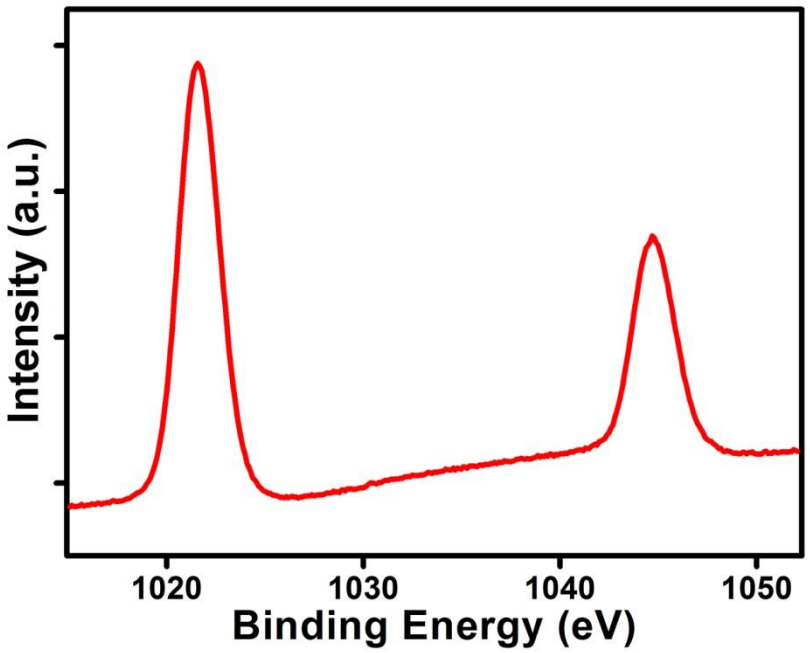

Figure S1. Zn 2p X-ray photoelectron spectroscopy (XPS) spectra of ZnO_2 NPs.

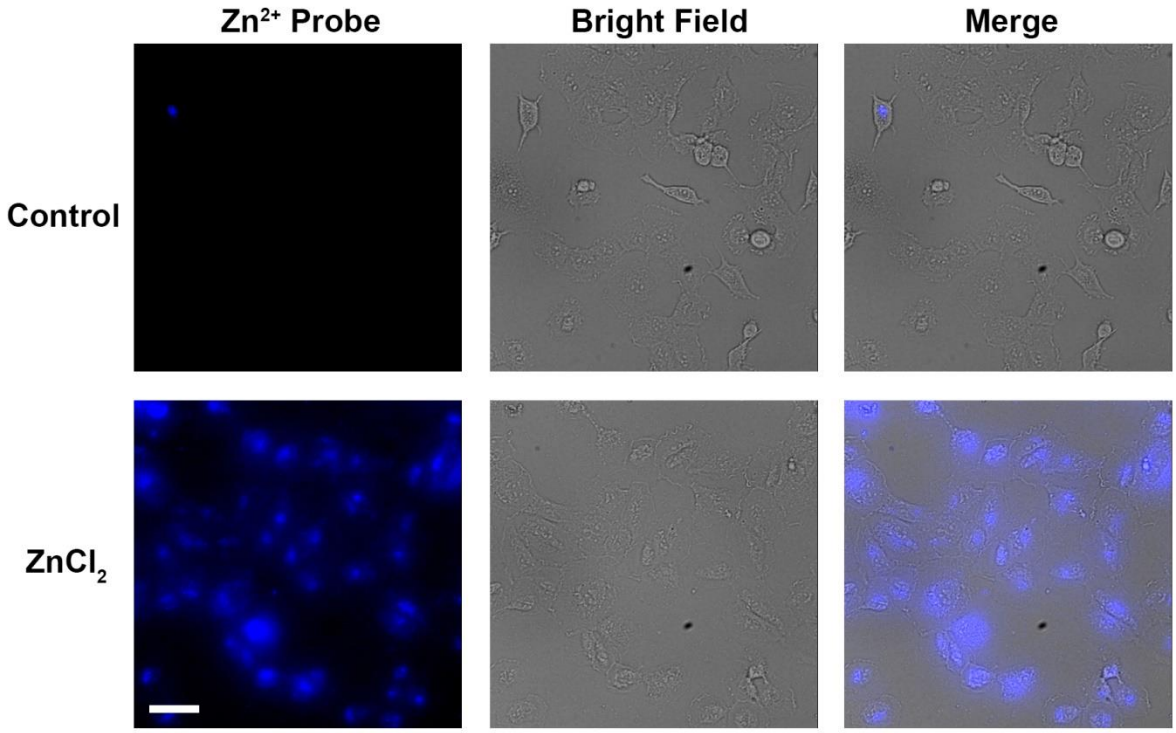

Figure S2. Fluorescence images of zinquin ethyl ester-stained U87MG cells after incubation with 100 μM $ZnCl_2$ for 4 h. Scale bar, 50 μm.

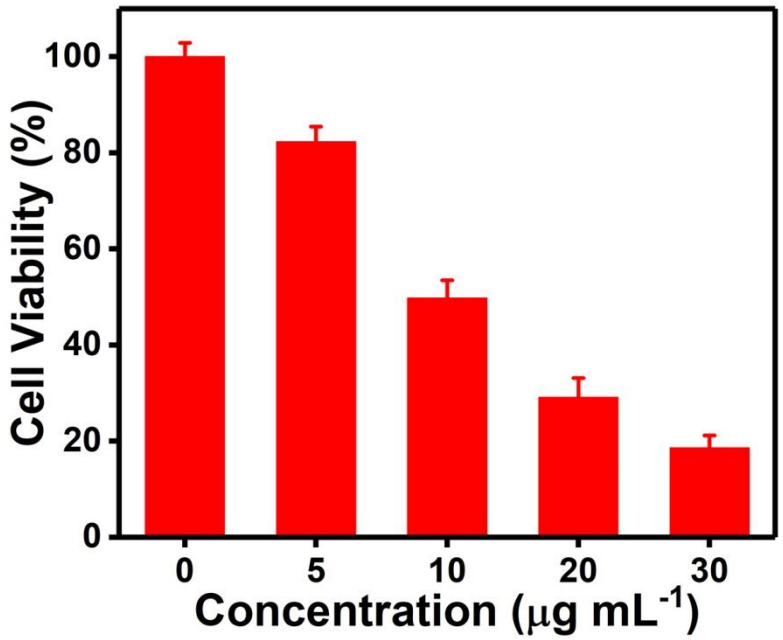

Figure S3. *In vitro* anticancer activity of ZnO_2 NPs after 48 h of incubation.

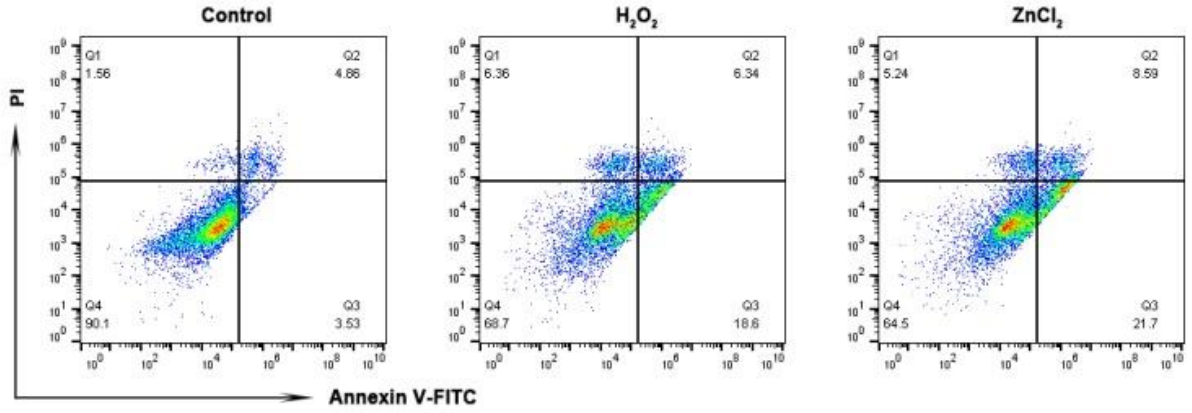

Figure S4. Flow cytometry data showing apoptosis in U87MG cells after incubation with 200 μM H_2O_2 or 200 μM $ZnCl_2$ for 12 h.

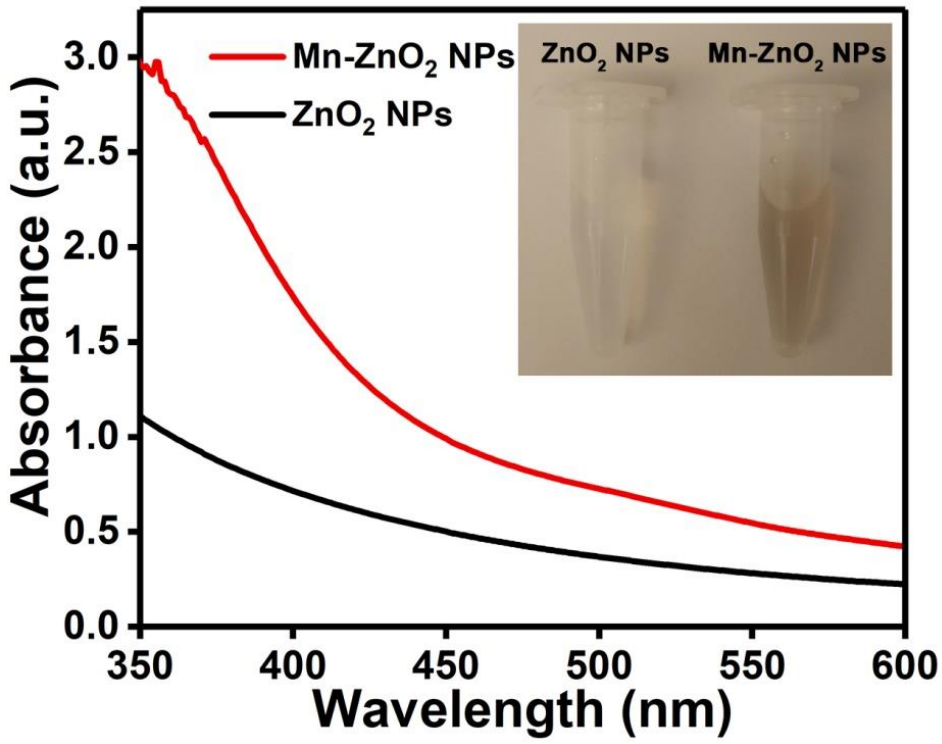

Figure S5. UV/Vis absorption spectra of ZnO_2 NPs before and after Mn-doping.

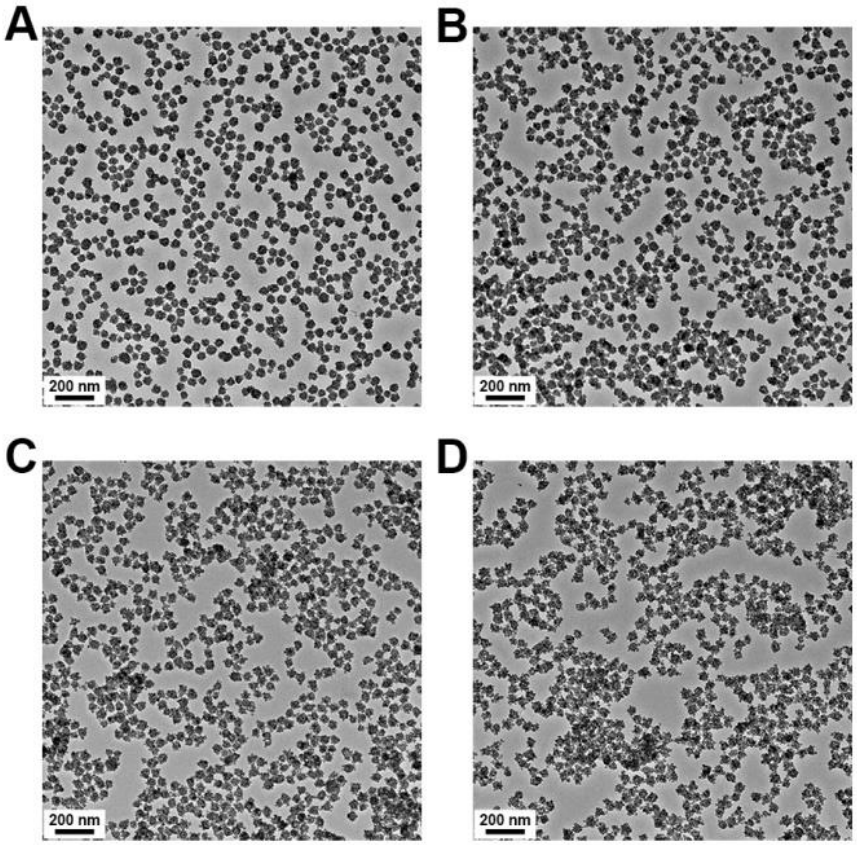

Figure S6. TEM images of Mn-ZnO_2 NPs with different ratio of Mn. The weight fraction of Mn: (A) 0%, (B) 4.3%, (C) 6.5%, and (D) 10.6%.

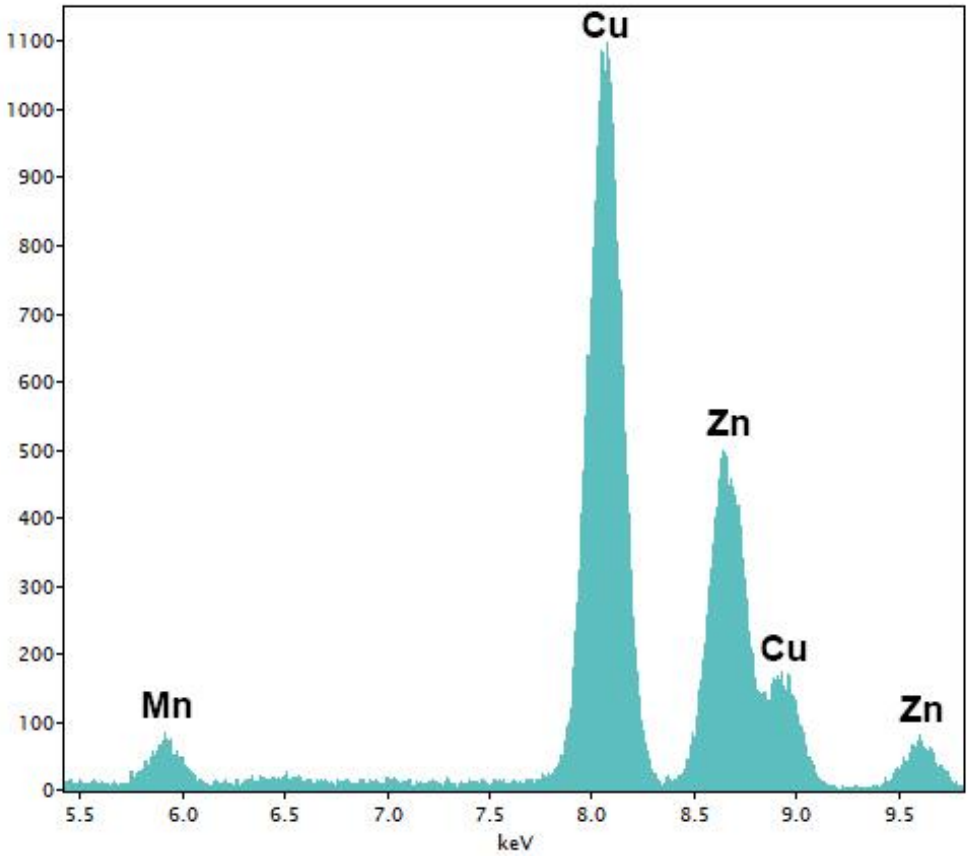

Figure S7. EDS spectrum of Mn-ZnO_2 NPs. Note that the signal of Cu is from the copper grid.

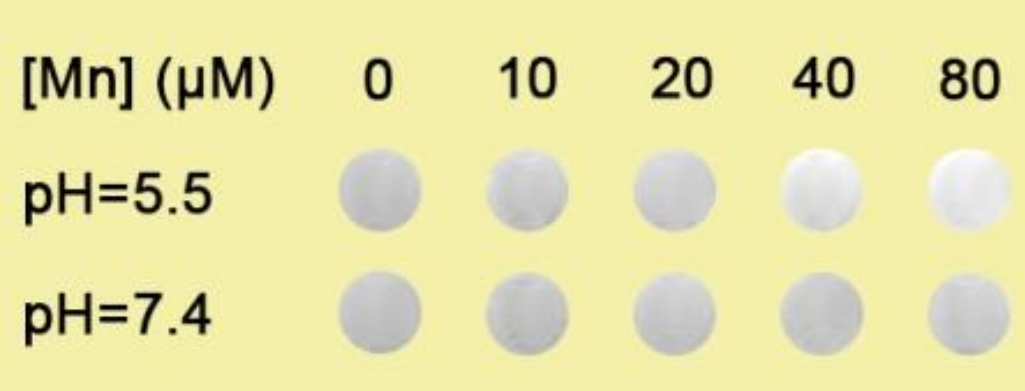

Figure S8. T_1-weighted MRI images of Mn-ZnO_2 NPs under different pH conditions.

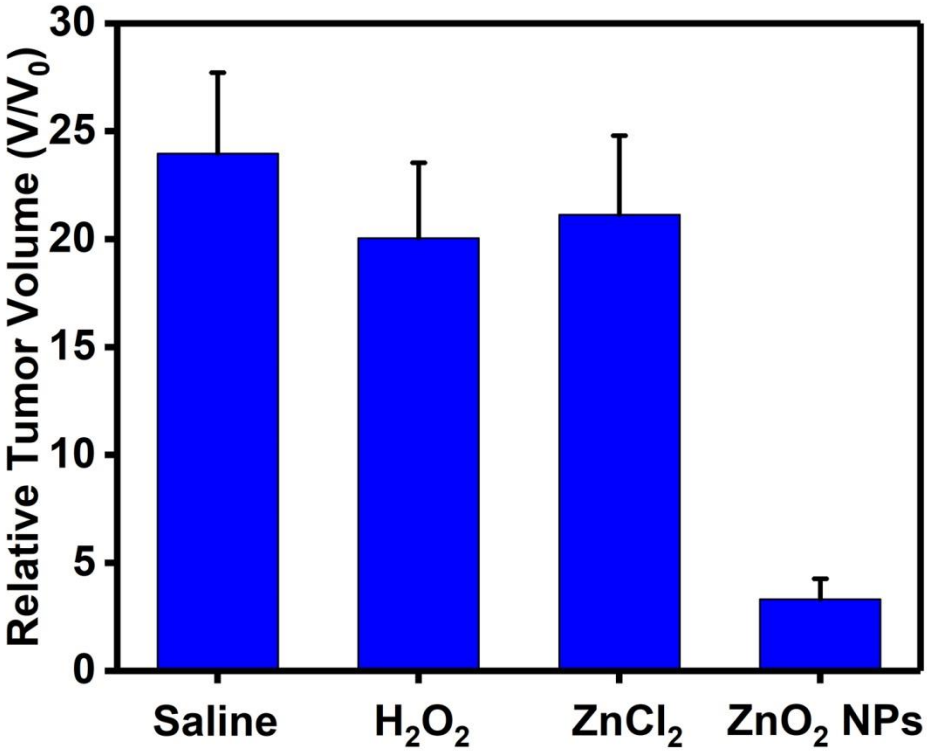

Figure S9. Tumor sizes at day 14 in different groups.

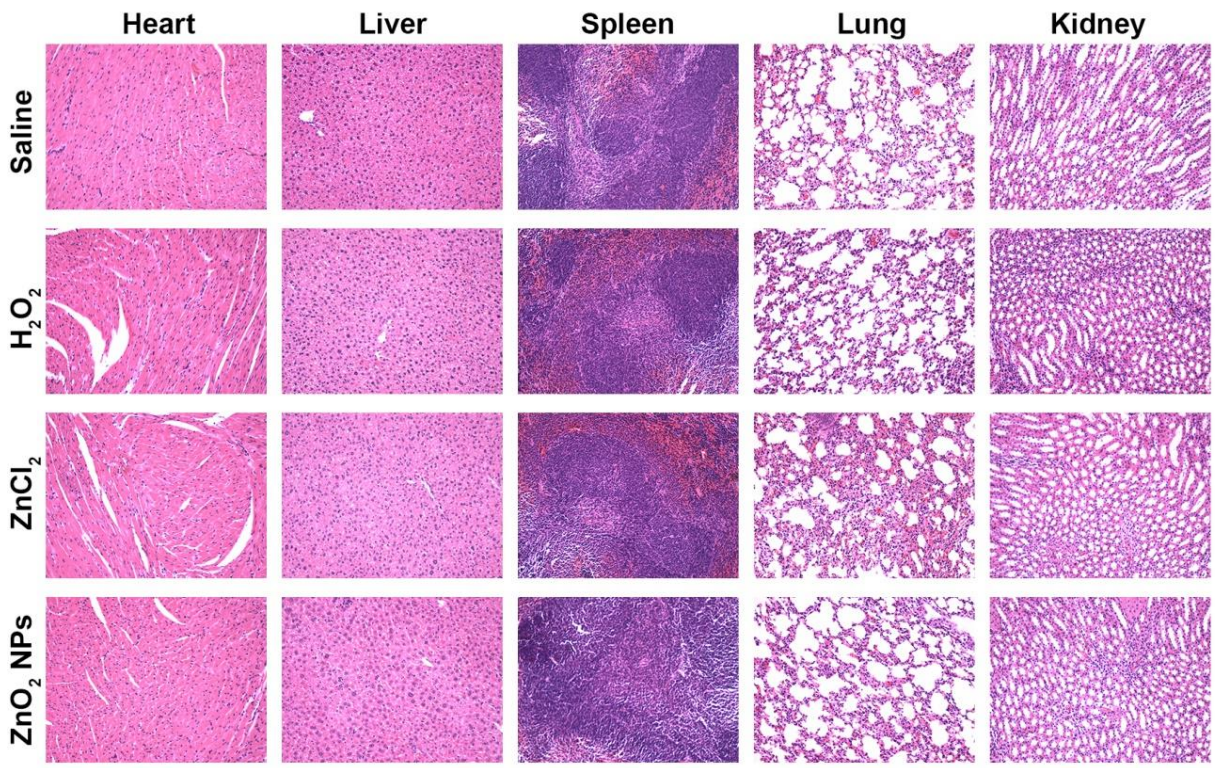

Figure S10. H&E-stained images of major organs collected from different groups of mice at day 14.